



Toxicological Evaluation of Aromatic Hydrocarbons Using Toxi-Chromo Test and Mice Model

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Abstract: This study aimed to evaluate the toxic effects of aromatic hydrocarbons using Toxi-chromotest and mice model. The methods employed for the toxicological evaluation involving physicochemical analysis of the marine wastewater, Toxi – chromo test using mutant *Escherichia coli*, and sub-chronic toxicity testing using mice model. The Nembe waterside wastewater sample contains higher fractions of physicochemical parameters than other sampled locations. Toxi – chromo testing revealed that the three sampling sites and aromatic hydrocarbons solutions were categorized in the order of toxicity: Onne wastewater > Nembe wastewater > Abonema wastewater and pyrene distilled water > anthracene distilled water > xylene distilled water with EC₁₀₀ of 0.28, 0.35, 0.40 and 0.22, 0.30 and 6.44 %, respectively. The mice model revealed no significant changes in the weight of tissues but significant differences were detected in the haematological parameters of the different doses of the aromatic hydrocarbons and their controls. These findings revealed ecological and animal toxicity potentials of these samples and the aromatic hydrocarbons and urgent attention is therefore needed to combat their hazardous consequences.

Keywords: Acute Toxicity, Albino mice, Aromatic hydrocarbons, *E. coli*, Marine wastewater
